

2016 State Report Card

How much carbon is stored in our trees?

As trees grow they convert carbon dioxide (CO₂) from the atmosphere into living vegetation. This reduces greenhouse gases in the atmosphere and slows global warming. Trees also provide habitats for native plants and animals, improve air and water quality, enhance our recreational areas and provide us with wood and other products.

Since European settlement, extensive areas of our native vegetation have been cleared for agriculture and other human activities (reported [here](#)). This has reduced the amount of carbon stored in remnant native trees to about 27 per cent of historical stocks in the state.

Estimates of our current carbon stocks are limited to the above-ground portion of remnant trees and larger shrubs in the South East, Eyre Peninsula, Kangaroo Island, Northern and Yorke, SA Murray-Darling Basin and Adelaide and Mount Lofty Ranges [NRM](#) regions. Estimates exclude grasslands, sedgelands, herbfields and very sparse tree or shrub communities. Carbon stocks in the arid NRM regions are being investigated with remote sensing technologies. Carbon is also stored in the soil, as reported [here](#).



Regional trends of carbon storage in remnant native trees



State target

Maintain the productive capacity of our natural resources

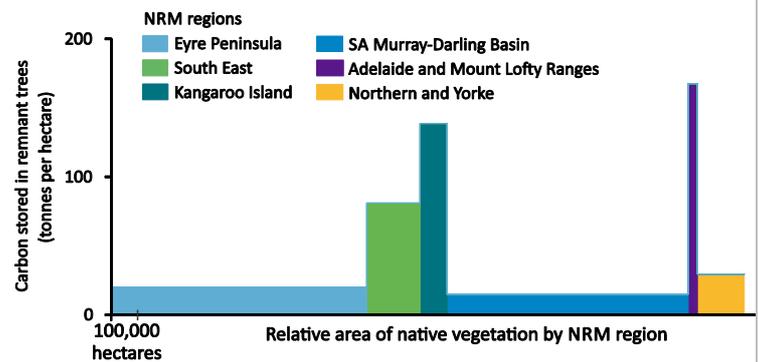
Trend (2007–12)

Stable

Since the protection of native vegetation by legislation in 1991, carbon storage has remained fairly stable

Carbon stocks in our remnant vegetation have been relatively stable since vegetation was protected in 1991. Short term variations are mainly influenced by climate and fires. Carbon stocks in revegetation and forestry are unknown.

The Adelaide and Mount Lofty Ranges NRM region stores the most carbon per hectare of native vegetation followed by Kangaroo Island and the South East NRM regions. Although the Eyre Peninsula region has the lowest rate of carbon stored per hectare of the agricultural regions, it has the largest total carbon stock on account of the large area of remaining vegetation (graph on right).



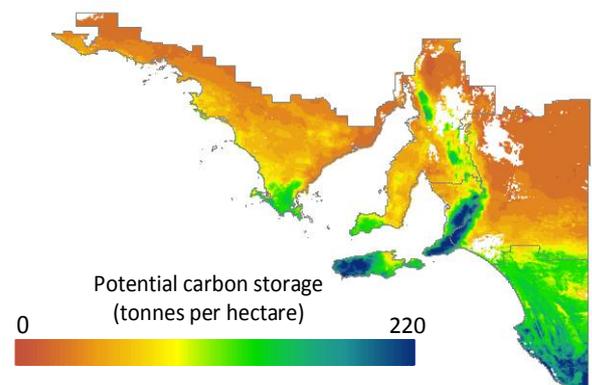
Where we are at (2012)

Poor

153 million tonnes of carbon is stored in remnant native trees

Restoring native vegetation and growing trees for carbon crops can increase our carbon stocks and offset greenhouse gas emissions. With only 27 per cent of historical carbon stocks remaining, there is scope to increase our carbon stocks.

Areas of higher rainfall and good soil quality have the highest potential for carbon storage (map on right), but they also have the highest agricultural productivity. Reforestation of agricultural land needs to consider the trade-off between benefits (CO₂ storage, improved conservation, protection from erosion and dryland salinity) and risks (loss of production of food and fibre, impact on existing vegetation, diverted rainfall and competition for groundwater resources). Improved assessments of land use capability can identify suitable areas for revegetation within all agricultural areas.



Reliability of information



Very good

Further information: [Technical information for this report card](#), [Carbon in vegetation](#)

